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EXAMINER

PHU, SANH D

ART UNIT

PAPER NUMBER

2682

10

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,632

Applicant(s)

CONTRACTOR, SUNIL H.

Examiner

Sanh D Phu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59,64 and 70-75 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-59,64 and 70-75 is/are rejected.
7) ☒ Claim(s) 60-63,65-68 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 4/2/04.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 70–75 should be renumbered as 69–74, respectively. The claims 70–75 are addressed as claims 69–74, which are used for this Office Action.

Claim Rejections – 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 59 and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by Karp et al (6,154,727), prior art of record.

As per claims 59 and 64, see figures 1-9, 11b, and col. 2, line 63 to col. 9, line 15 and col. 11, line 14 to col. 12, line 40, Karp et al discloses a method and associated system (see figure 1) comprising:

step/means (inherently included) of providing a portable wireless device (112) to a service person (110b);

step/means (140) of acquiring location data of the portable wireless device (see also figure 3);

step/means (120) of converting positions based on the location data to corresponding street addresses using a database (134) for converting coordinate pairs to street addresses (see also figure 4B, 6, 7B, 8);

step/means (120) of creating a schedule containing one or more entries corresponding to predetermined visit sites, each entry in the schedule corresponding to a location to be visited (see figures 6, 7b, 8);

step/means (120) of selecting a threshold (e.g, estimated time) associated with a visit to a location (see col. 5, lines 35–38); and

step/means (120) of generating a report based on the corresponding street addresses (call site) and the threshold (see col. 3, lines 21–25 and col. 5, lines 38–40).

Claim Rejections – 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 8, 13–22, 26, 30, 35, 40–53, 58 and 69–74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karp et al.

Regarding to claim 1, (see Fig. 1, 2, col. 2, line 62 to col. 4, line 58), Karp et al discloses a system for tracking service personnel (Fig. 1) wherein the system comprises:

a portable wireless device (112) operated by a service person (110B);
causing means (inherently included in said portable wireless device (112) for causing said portable wireless device to transmit a signal (144) to a service provider (120);

location identification means (140) responsive to the transmitted signal for acquiring location data (142B) of the portable wireless device (see col. 3, lines 21-59);

a processor at said service provider (120) for receiving the location data and converting positions based on the location data to corresponding street addresses using a database for converting coordinate pairs to street addresses (see col. 3, line 15 to col. 4, lines 14 and figures 3, 4b, 6, 7b and 9);

report generation means (136) at said service provider (120) for generating a service person track report (122) based on the corresponding

street addresses (see col. 3, lines 15–20 and col. 3, line 61 to col. 4, line 33 and figures 3, 4b, 6, 7b and 9); and

transmitting means for transmitting the service person track report generated by the service provider (120) to a subscriber (employer of said service person) in order to track a service person (110A, 110B) (see col. 4, lines 5–14).

Karp et al does not disclose that said transmitted signal (144) is automatically sent by said portable wireless device (112). However, it would have been obvious at the time the invention was made to one person skilled in the art to implement said portable wireless device to automatically transmit said signal since it has been held that making an operation automatic is obvious. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding to claim 2, (see Fig. 1,3, 4A–B), Karp et al discloses that the location identification means acquires location data based on the detection of a specific phone number (118A) associated with tracking service personnel (col. 4, line 59 to col. 5, line 45 and col. 5, lines 50 to col. 6, line 17).

Regarding to claim 8, (see Fig. 10B), Karp et al discloses that the location data is based on a wireless network-based angle of arrival (AOA) computation (col. 9, lines 45–56).

Regarding to claim 13, Karp et al discloses a system for tracking service personnel wherein the system, comprising:

a portable wireless device (112) operated by a service person (110B);
causing means (inherently included in said portable wireless device (112) for causing said portable wireless device to transmit a signal (144) to a service provider (120);

location identification means (140) responsive to the transmitted signal for acquiring location data (142B) of the portable wireless device (see col. 3, lines 21–59);

a processor at a wireless service provider (120) for converting positions based on the location data to corresponding street addresses using a database, the database comprising a geographic information system (GIS) (which is geographic data) (see col. 3, lines 15 to col. 4, line 14 and figures 3, 4b, 6, 7b and 9) ;

report generation means (136) at said wireless service provider for generating a service person track report (122) based on the corresponding street addresses (see col. 3, line 61 to col. 4, line 33, and figures 3, 4b, 6, 7b and 9); and

transmitting means for transmitting the service person track report generated by the service provider (120) to a subscriber (employer of said service person) in order to track a service person (110A, 110B) (see col. 4, lines 5-14).

Karp et al does not disclose that said transmitted signal (144) is automatically sent by said portable wireless device (112). However, it would have been obvious at the time the invention was made to one person skilled in the art to implement said portable wireless device to automatically transmit said signal since it has been held that making an operation automatic is obvious. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding to claim 14, Karp et al discloses that the location identification means acquires location data according to a periodic time interval (see col. 3, lines 21-30).

Regarding to claim 15, Karp et al discloses that the service person track report is used by the subscriber to prepare a bill (see col. Col. 3, line 61 to col. 4, line 14).

Regarding to claim 16, Karp et al discloses that the service person track report is used by the subscriber to gather efficiency statistics on the service person or on a group of service persons (see col.3, line 61 to col. 4, line 14).

Regarding to claim 17, Karp et al discloses that the service person track report includes information indicating duration of time the portable wireless device was at a specific street address (see col. 3, line 61 to col. 4, line 14).

Regarding to claim 18, Karp et al discloses a system tracking service personnel wherein the system, comprising:

a portable wireless device (112) operated by a service person (110B);

causing means (inherently included in said portable wireless device (112) for causing said portable wireless device to transmit a signal (144) to a service provider (120)

location identification means (140) for acquiring location data (142B) of the portable wireless device (see col. 3, lines 21-59);

a processor at a wireless service provider (120) responsive to the transmitted signal for converting positions based on the location data to corresponding street addresses using a database for converting coordinate pairs to street addresses, and for comparing the positions to a schedule of predetermined sites in order to confirm whether a site visit was made (see col. Col. 3, line 15 to col. 4, line 33, col. 5, lines 15–25 and col. 6, lines 18–27, and figures 3, 4b, 6, 7b and 9);

tracking means (136) for generating a service person track report based on at least the corresponding street addresses (see col. 3, line 61 to col. 4, line 14 and figures 3, 4b, 6, 7b and 9); and

transmitting means (120) for generating said service person track report and transmitting the service person track report to a subscriber (employer of said service person) in order to track a service person (110A, 110B) (see col. 4, lines 5–14).

Karp et al does not disclose that said transmitted signal (144) is automatically sent by said portable wireless device (112). However, it would

have been obvious at the time the invention was made to one person skilled in the art to implement said portable wireless device to automatically transmit said signal since it has been held that making an operation automatic is obvious. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding to claim 19, (see Fig. 5), Karp et al discloses that the schedule is generated by accessing the database in order to convert street addresses corresponding to the predetermined sites to coordinate pairs corresponding to the predetermined sites (see col. 5, line 15–25 and col. 6, line 18–22)

Regarding to claim 20, (see Fig. 6), Karp et al discloses that the coordinate pairs comprise X–Y coordinate pairs or longitude–latitude coordinate pairs (col. 5, lines 15–25 and col. 6, lines 18–22).

Regarding to claim 21, (see Fig. 7A, 7B, 8), Karp et al discloses that the service person track report includes information indicating whether a site visit was made to each of the predetermined sites (see col. 3, line 60 to col. 4, line 15 and col. 8, lines 31–64).

Regarding to claim 22, (see Fig. 7A, 7B), Karp et al discloses that the location identification means acquires location data based on the detection of

detection of a specific phone number associated with tracking service personnel or the detection of an emergency phone number (see col. 8, lines 31–55).

Regarding to claim 26, (see Fig. 10B), Karp et al discloses that the location data is based on a wireless network–based angle of arrival (AOA) computation (see col. 9, lines 45–56).

Regarding to claim 30, (see Fig. 1, 2, col. 2, line 62 to col. 4, line 58), Karp et al discloses a method for tracking service personnel (Fig. 1) wherein the method, comprising:

Step (120) for receiving a signal (144) transmitted from a wireless portable device (112) of a service person (110B);

Step (140) for acquiring location data of the portable wireless device in response to the received signal (see col. 3, lines 21–59);

Step (120) for converting positions based on the location data to corresponding street addresses using a database for converting coordinate pairs to street addresses (see col. 3, line 15 to col. 4, line 33, col. 5, lines 15–25, col. 6, lines 18–27 and figures 3, 4b, 6, 7b and 9);

Step (136) for generating a service person track report (122) based on the corresponding street addresses (see col. 3, line 61 to col. 4, line 14 and figures 3, 4b, 6, 7b and 9); and

Step (120) for transmitting said service person track report to a subscriber (employer of said service person) (see col. 4, lines 5–14).

Karp et al does not disclose that said transmitted signal (144) is automatically sent by said portable wireless device (112). However, it would have been obvious at the time the invention was made to one person skilled in the art to implement said portable wireless device to automatically transmit said signal since it has been held that making an operation automatic is obvious. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding to claim 35, (see Fig. 10B), Karp et al discloses that the location data is based on a wireless network-based angle of arrival (AOA) computation (see col. 9, lines 45–56).

Regarding to claim 40, Karp et al discloses a method for tracking service Personnel wherein the method, comprising:

Step (120) for receiving a signal (144) transmitted from a wireless portable device (112) of a service person (110B);

Step (140) for acquiring location data of the portable wireless device in responsive to the received signal (see col. 3, lines 21–59);

Step (120) for converting positions based on the location data to corresponding street addresses using a database, the positions comprising X–Y pairs or latitude–longitude pairs, and the database comprising a geographic information system (GIS) (which is geographic data) (see col. 3, line 15 to col. 4, line 33, col. 5, lines 15–25, col. 6, lines 18–27 and figures 3, 4b, 6, 7b and 9);

Step (136) for generating a service person track report based on the corresponding street addresses (see col. 3, line 61 to col. 4, line 14, and figures 3, 4b, 6, 7b and 9), and

Step (120) for transmitting said service person track report to a subscriber (employer of said service person) (see col. 4, lines 5–14).

Karp et al does not disclose that said transmitted signal (144) is automatically sent by said portable wireless device (112). However, it would have been obvious at the time the invention was made to one person skilled in

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the art to implement said portable wireless device to automatically transmit said signal since it has been held that making an operation automatic is obvious. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding to claim 41, Karp et al discloses step of acquiring corresponds to a periodic time interval (see col. 3, lines 21–30).

Regarding to claim 42, Karp et al discloses step of transmitting the service person track report from a wireless carrier to a subscriber (see col. 3, line 61 to col. 4, line 14).

Regarding to claim 43, Karp et al discloses step of preparing a bill based on the service person track report (see col. 3, line 61 to col. 4, line 14).

Regarding to claim 44, Karp et al discloses step of gathering efficiency statistics on the service person or a group of service persons based on the service person track report (see col. 3, line 61 to col. 4, line 14).

Regarding to claim 45, Karp et al discloses step of comparing the positions to a schedule of predetermined sites in order to confirm whether a site visit was made (see col. 3, line 15 to col. 4, line 14).

Regarding to claim 46, Karp et al discloses that the schedule of predetermined sites is generated by accessing the database in order to convert street addresses corresponding to the predetermined sites to coordinate pairs corresponding to the predetermined sites (see col. 5, lines 15–25, col. 6, lines 18–27 and col. 7, line 60 to col. 8, line 17).

Regarding to claim 47, Karp et al discloses that the step of comparing is based on a threshold (see col. 3, line 61 to col. 4, line 2).

Regarding to claim 48, Karp et al discloses that the threshold is based on a distance (see col. 3, line 61 to col. 4, line 2.)

Regarding to claim 49, Karp et al discloses that the threshold is based on a distance and a time interval (see col. 3, line 61 to col. 4, line 2).

Regarding to claim 50, (see Fig. 7A, 7B, 8), Karp et al discloses that the service person track report includes information describing whether a site visit was made to each of the predetermined sites (see col. 3, line 61 to col. 4, line 2 and col. 8, lines 31–64).

Regarding to claim 51, Karp et al discloses that the service person track report includes information indicating duration of time the portable wireless

device was at one of the corresponding street addresses (see col. 3, line 61 to col. 4, line 33).

Regarding to claim 52, (Fig. 1), Karp et al discloses a system for tracking personnel wherein the system, comprising

means (112) for providing a portable wireless device as a two-way communications of a service person (110B);

means (140) for acquiring location data of the means for providing two-way communications in responsive to a signal (144) transmitted by means for providing two-way communication (see col. 3, line 21–59);

means (120) for converting the location data into corresponding street addresses (see col. 3, line 15 to col. 4, line 14, and figures 3, 4b, 6, 7b and 9);

means (136,138) for comparing the location data to a schedule of predetermined sites in order to determine whether a site visit was made (see col. 3, line 15 to col. 4, line 14, and figures 3, 4b, 6, 7b and 9);

means (136) for generating a service track report to be sent by a service provider (120) to a subscriber (employer of said service person) (see col. 3, line 61 to col. 4, line 14); and

means (120) for transmitting the service track report to the subscriber (see col. 4, lines 5–14).

Karp et al does not disclose that said transmitted signal (144) is automatically sent by said portable wireless device (112). However, it would have been obvious at the time the invention was made to one person skilled in the art to implement said portable wireless device to automatically transmit said signal since it has been held that making an operation automatic is obvious. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 194 (CCPA 1958).

Regarding to claim 53, Karp et al discloses that the means for providing two-way communications comprises a cell phone (see col. 2, lines 33–61).

Regarding to claim 58, Karp et al discloses that the service track report includes information of the service person track as a function of time and information describing whether a site visit was made (see col. 3, line 52 to col. 4, line 14).

As per claims 69–74, Karp et al does not disclose a timer for controlling timing of transmission of the signal (144). However, in Karp et al, device (112) for causing and transmitting the signal (144) is wireless communication device.

On the other hand, using a wireless communication device, being implemented as a digital device having a controlling clock (timer) to control signals to be transmitted for communications, is well-known in the art, and the examiner takes Official Notice. Therefore, for an application, it would have been obvious for a person skilled in the art, when building Karp et al invention, to implement device (112) as a digital device having a controlling clock (timer) to control signals (144) to be automatically transmitted in a timely manner.

7. Claim 3-6, 7, 9-12, 23-25, 27-29, 31-34, 36-39 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karp et al (6,154,727) in view of Fitch et al (6,321,092).

Regarding to claim 3, Karp et al does not disclose that the location identification means further acquires location data based on the detection of an emergency phone number.

Fitch et al teaches acquiring location data based on a specific phone number in order to forward the location data to a location application, and also based on detection of an emergency phone number in order to promptly forward the location data to a corresponding agency (see (116) and (118) of

figure 1 and col. 6, lines 19–28).

Therefore, for an enhancement, it would have been obvious for person skilled in the art to implement Karp et al also acquiring location data based on detection of an emergency phone number in order to promptly forward the location data to a corresponding agency, as taught by Fitch et al.

Regarding to claim 4 (see Fig. 1, 3, 4A–B), Karp et al discloses that the detection is performed by a mobile telephone switching office (118B) (col. 2, line 62 to col. 3, line 14).

Regarding to claim 5, Karp et al in view of Fitch et al teaches that the location identification means forwards the location data to a first device if the specific phone number is detected and forwards the location data to a second device if the emergency phone number is detected (see Fitch et al, (116) and (118) of figure 1 and col. 6, lines 19–28).

Regarding to claim 6, Karp et al in view of Fitch et al teaches that the first device is the processor (e.g., a location application for vehicle tracking or for location based–billing programs) and the second device is one of a public

service answering point, an emergency services router, and a database coupled to a public service answering point (e.g., a location application for 911 calls) (see Fitch et al, (116) and (118) of figure 1 and col. 6, lines 19–28).

Regarding to claims 7, 9–11, Karp et al does not disclose that the location data is computed based on one of, or in a combination among, methods of TDOA computation, AOA computation, LPM computation and GPS computations.

Fitch et al teaches that location data can be computed based on one of, or in a combination among, methods including TDOA computation, AOA computation, LPM computation and GPS computations in order to obtain a desired degree of precision for the result of the obtained location data (see col. 5, lines 18–24, col. 6, lines 30–39, and col. 8, lines 23–55).

Therefore, for an enhancement, it would have been obvious for a person skilled in the art, to implement Karp et al location identification means (140) for also acquiring location data based on variety of computation methods, as taught by Fitch et al teaches, e.g., methods including TDOA computation, AOA

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computation, LPM computation and GPS computation in order to obtain a desired degree of precision for the result of the obtained location data.

Regarding to claim 12, Karp et al in view of Fitch et al discloses that the portable wireless device includes a GPS receiver if a GPS computation is used (see Fitch et al, col. 5, line 66 to col. 6, line 3).

Claim 23 is rejected with similar reasons set forth above for claim 5.

Claim 24 is rejected with similar reasons set forth above for claim 6.

Claims 25, 27-29 are rejected with similar reasons set forth above for claims 7, 9-11.

Claim 31 is rejected with similar reasons set forth above for claim 3.

Claim 32 is rejected with similar reasons set forth above for claim 5.

Claim 33 is rejected with similar reasons set forth above for claim 6.

Claims 34, 36-38 are rejected with similar reasons set forth above for claims 7, 9-11.

Claim 39 is rejected with similar reasons set forth above for claim 12.

Claim 54 is rejected with similar reasons set forth above for claims 7, 9-11.

Claim 55 is rejected with similar reasons set forth above for claim 3.

Claim 56 is rejected with similar reasons set forth above for claim 5.

Claim 57 is rejected with similar reasons set forth above for claim 6.

Allowable Subject Matter

8. Claims 60–63 and 65–68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1–58 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

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filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D Phu whose telephone number is (703)305-8635. The examiner can normally be reached on 8:00-16:30.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sanh D. Phu
Examiner
Art Unit 2682

SP


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
4/30/04